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09/660,005	09/12/2000	Thomas E. Saulpaugh	5181-66200	6061

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EXAMINER	
BENGZON, GREG C	
ART UNIT	PAPER NUMBER
2144	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/660,005	SAULPAUGH ET AL.	
	Examiner	Art Unit	
	GREG BENGZON	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-17 and 21-28* is/are rejected.

7)☒ Claim(s) *5-7,18-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. Claims 1-28 are pending.

Making Final

Applicant's arguments filed 02/15/2008 have been fully considered but they are not persuasive.

The Examiner is maintaining the rejection(s) using the same grounds for rejection and thus making this action FINAL.

Priority

This application claims benefits of priority from Provisional Application 60/202975 filed May 9, 2000.

This application claims priority to various provisional applications. The effective filing date for those claims which do not have proper support in their provisional application is 9/12/2000.

Claim objections

Claims 5-7 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and additionally remedied to overcome issues raised under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 21-26 are directed towards '*a tool for generating an interface*'. Upon inspection of the Applicant Specifications Page 15 the Examiner concludes said tool is comprised of more than software components.

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and USPTO personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4,8-17,21-28 rejected under 35 U.S.C. 102(e) as being anticipated by Weschler (US Patent 6842903).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Weschler disclosed (re. Claim 1) receiving an address for a service (Weschler-Column 8 Lines 5-10) within the distributed computing environment ; linking said address to a pre-generated (Weschler-Column 4 Lines 15-30, Column 6 Lines 25-30 , 'factory' methods) message interface (Weschler-Column 6 Lines 20-25) for accessing said service, wherein said message interface comprises computer-executable code *installed* in (Weschler-Column 6 Lines 55-60) to said device *to implement said receiving and linking*, (Weschler-Column 4 Lines 15-30, Column 6 Lines 25-30 , *'factory' methods, 'service adapters'*) and wherein said linking creates a message endpoint (Weschler-Column 6 Lines 45-50) for said device to send messages to said service (Weschler-Column 6 Lines 60-65) at said address in order to access said service; using said message endpoint to send messages to said address to access said service.

Weschler disclosed (re. Claim 2) message endpoint verifying that said messages sent to said service comply with a message schema (Column 6 Lines 25-30) for said service.

Weschler disclosed (re. Claim 3,4) wherein said message schema defines messages to be sent to and received from said service, wherein said messages are defined in a data representation language. (Weschler-Column 6 Lines 60-65)

Weschler disclosed (re. Claim 8) receiving a schema defining messages for accessing the service; (Weschler-Column 6 Lines 30-35,*'gaining a reference to data store adapters'*)

generating message endpoint code according to said schema; (Weschler-Column 9 Lines 20-25,'*the application casts to the interface*')

linking said message endpoint code into executable operating code for the device (Weschler-Column 8 Line 60-65,'*service connector may be compiled along with the application*', Column 9 Lines 20-25,'*the application casts to the interface*') and loading the message endpoint code and operating code onto the device.

The Examiner notes that data store adapters would inherently involve a schema for accessing the data structures involved.

Claims 9-17,21-28 are rejected on the same basis as Claims 1-4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1-4,8-17,21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US Patent 6560633) hereinafter referred to as Roberts, in view of Chen et al. (US Publication 20020062334) hereinafter referred to as Chen.

Roberts disclosed message endpoint construction (inter alia, Column 4, Lines 30-31) in a distributed computing environment (inter alia, Column 2, Lines 35-43) where a pre-generated message interface was constructed prior to runtime (Column 13 Lines 15-20, '*templates build the program prior to running*') to link a service address to a defined message endpoint directive (inter alia, Column 4, Lines 34-38). The message endpoint schema(s) were well known and defined within the boundaries of the XML specification. See, inter alia, Column 4, Lines 12-20. Roberts web service applications (WSA) provided access control and interface definitions to application services. See, inter alia, Column 4, Lines 34-38.

Further, Roberts disclosed run-time models (RTM) which served to define the process of the distributed application process. See, inter alia, Columns 7-8. Service calls were described to invoke application processes including reference to any corresponding WSA. See, inter alia, Column 9, Lines 1-8. The use of Java for WSA construction (Column 11, Lines 11-18) as well as XML based messaging (Column 16, Lines 20-24) were fully disclosed.

Lastly, since services were available on the network, and unique addressing/specification/designation of every service was inherent in order for the service to be called, and messaging was fully enabled using XML documents defining both incoming and outgoing format(s) for services, the linking of addresses) to a given pre-generated messaging interface was present.(Roberts-Column 13 Lines 35-40)

However, Roberts did not disclose (re. Claim 1) where the template is built-in to said device.

Chen disclosed (re. Claim 1) distributed dynamic agents to access to web services, wherein said agents are built-in APIs to the said device. (Paragraph 63)

Roberts and Chen are analogous art because they present concepts and practices regarding the use of pre-defined interfaces for web services. At the time of the invention it would have been obvious to combine Chen into Roberts. The motivation for said combination would have been, as Chen suggests (Abstract), to allow the pre-defined template by Roberts adjust its capability for accommodating environment and requirement changes.

Roberts-Chen disclosed (re. Claim 2) message endpoint verifying that said messages sent to said service comply with a message schema (Roberts-Column 17 Lines 1-5,'*maintain a mapping of the feature that produced each entity*') for said service.

Roberts-Chen disclosed (re. Claim 3,4) wherein said message schema defines messages to be sent to and received from said service, wherein said messages are defined in a data representation language. (Roberts-Column 16 Lines 20-25)

Roberts-Chen disclosed (re. Claim 8) receiving a schema defining messages for

accessing the service; (Roberts- Column 13 Lines 15-20, '*templates build the program prior to running'*)

generating message endpoint code according to said schema; (Roberts- Abstract,*' template may be utilized to regenerate the RTM to produce a new web service or XML documen'; see* Figure 4*)*

linking said message endpoint code into executable operating code for the device (Roberts – Column 4 Lines 50-65,' *a runtime model that declares multiple actions, each of which can be bound to the execution of elaborate functionality defined in functions*)

and *installing* the message endpoint code and operating code onto the device. (Roberts- Column 5 Lines 50-65,*'The Onload function establishes the initial state of the WSA, and it performs the unit of work that generates the response data to the web services request',* Chen-Paragraph 63)

Response to Arguments

Applicant's arguments filed 02/15/2008 have been considered but are not persuasive.

The Applicant presents the following argument(s) [*in italics*]:

the Examiner again lists claim 8 as rejected under 35 U.S.C. 103(a), but fails to provide an actual rejection.

Roberts-Chen disclosed (re. Claim 8) receiving a schema defining messages for accessing the service; (Roberts- Column 13 Lines 15-20, '*templates build the program prior to running'*)

generating message endpoint code according to said schema; (Roberts-Abstract,*' template may be utilized to regenerate the RTM to produce a new web service or XML documen'; see* Figure 4*)*

linking said message endpoint code into executable operating code for the device (Roberts – Column 4 Lines 50-65,' *a runtime model that declares multiple actions, each of which can be bound to the execution of elaborate functionality defined in functions*)

and *installing* the message endpoint code and operating code onto the device. (Roberts- Column 5 Lines 50-65,*'The Onload function establishes the initial state of the WSA, and it performs the unit of work that generates the response data to the web services request',* Chen-Paragraph 63)

The Applicant presents the following argument(s) [*in italics*]:

In Weschler's the address at which a plug-in module is stored is not linked to a pre-generated message interface for accessing the service

The Examiner respectfully disagrees with the Applicant. Weschler disclosed (Column 8 Lines 50-55) a mechanism through which the application can obtain a reference (the URL address) to the service and use it. Where the plug-in is used to generate an interface to the service, and the application casts to the interface (Column 9 Lines 20-25), then Weschler disclosed *linking an address to a message interface* since the plug-in module is associated with said address.

The Applicant presents the following argument(s) [*in italics*]:

…Casting to an interface to use a service is not the same as linking an address to a message interface…

The Examiner respectfully disagrees with the Applicant.

While the Applicant presents the dictionary definition of '*casting*' it would be obvious to a person of ordinary skill in the art that in the cited portion Weschler does not refer to how different types of parameters / variables are involved. Thus the dictionary meaning of 'casting' would be totally out of context in the cited portions of Weschler. In the cited portions Weschler disclosed how a client application prepares to access a service using an interface. The Examiner notes that code generation, linking and binding are well-known steps in the application development process and are required for enabling the application to interact with the operating system. Thus when Weschler

disclosed '*casting to an interface'* it would be obvious that Weschler was referring to an execution preparation / instantiation process including code generation, linking and binding.

The Applicant presents the following argument(s) [*in italics*]:

Weschler does not describe verifying that messages sent to the service comply with a message schema for the service.

The Examiner respectfully disagrees with the Applicant. Weschler disclosed (Column 7 Lines 18-20) that the '*response message is sent back through API 203 to the appropriate protocol adapter 204 (or built-in adapter 205) to the requesting client application 202'*. Weschler disclosed the verification limitation because determining the appropriate protocol adapter would have inherently included verification for compliance with the message schema for the service.

The Examiner notes that where any data protocol/schema is involved, the applications using said data protocol would inherently involve a protocol check for compliance.

The Applicant presents the following argument(s) [*in italics*]:

…casting to an interface and compiling a service connector do not teach generating code according to the schema…

The Examiner respectfully disagrees with the Applicant. Where the interface/adapter is described to access XML documents (Weschler-Column 7 Lines 1-

5) then it would be obvious to a person of ordinary skill in the art that said interface is generated according to a schema.

The Applicant presents the following argument(s) [*in italics*]:

Roberts WSA interfaces are clearly meant to be downloaded and constructed at runtime.

The Examiner respectfully disagrees with the Applicant. As presented in the rejection above, Roberts disclosed where a pre-generated message interface was constructed prior to runtime (Column 13 Lines 15-20, '*templates build the program prior to running*').

The Applicant presents the following argument(s) [*in italics*]:

Roberts or Chen do not teach linking message endpoint code, generated according to a schema defining messages for accessing a service, into executable operating code for a device.

The Examiner respectfully disagrees with the Applicant. Roberts disclosed a regeneration process for a transformed runtime model and fully interactive user interfaces (Column 7 Lines 10-15), where the runtime models follow a schema (Column 7 Lines 45-50).

The Applicant presents the following argument(s) [*in italics*]:

Roberts does not disclose wherein message interface is implemented by computer-executable code installed on the device.

The Examiner respectfully notes that at the time of the invention distributed object code including code generators installed on client devices were well-known in the networking art. Furthermore while Roberts does not indicate computer-executable code installed on the device Chen clearly indicates dynamic agents as computer-executable code installed on the device . (Chen-Paragraph 38, *'dynamic agent stored in memory'*).

The Applicant presents the following argument(s) [*in italics*]:

Applicants assert that "a schema" for a runtime model may specify many different things, and that it may or may not have anything to do with defining messages for accessing a service.

The Examiner respectfully disagrees with the Applicant. Roberts disclosed constructing XML runtime models (Roberts-Column 16 Lines 20-25) for use with web services. (Roberts-Column 17 Lines 1-5)

The Applicant presents the following argument(s) [*in italics*]:

…these child runtime models and user interfaces are clearly not pre-generated message interfaces that are generated and linked into executable operating code for a device, according to the limitations of claim 8.

The Examiner respectfully disagrees with the Applicant.

Roberts disclosed templates, said templates represented by a block of XML data (Roberts-Column 12 Lines 55-60) and are thus equivalent to pre-generated message interfaces.

The Examiner notes that code generation, linking and binding are well-known steps in the application development process and are required for enabling an application to interact with the operating system. Thus when Roberts disclosed '*feature regeneration'* (Roberts-Column 16 Lines 30-35) it would be obvious that Roberts was referring to a execution preparation / instantiation process including code generation, linking and binding.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G. B./
Examiner, Art Unit 2144

/Paul H Kang/

Primary Examiner, Art Unit 2144